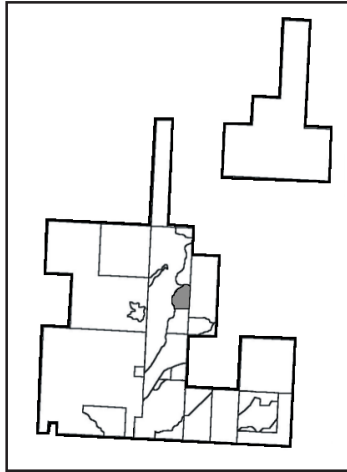


## Preserve



### C5a-P: Preserve, Clay County, (Section 31, Hagen Township)

#### Aggregate Potential:

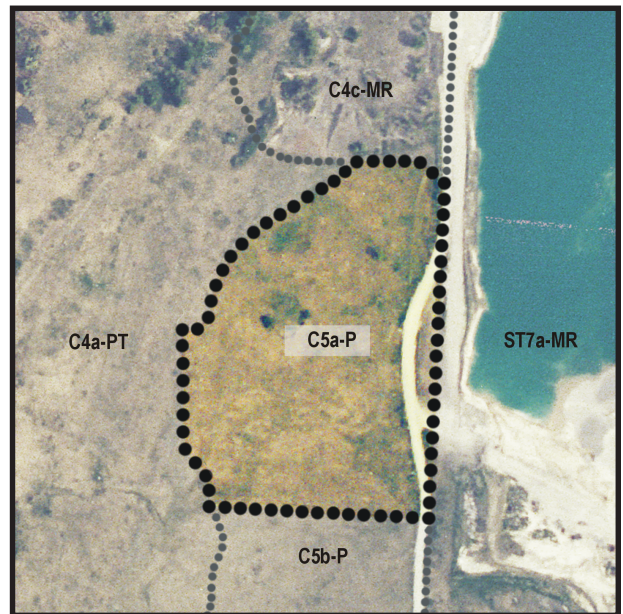
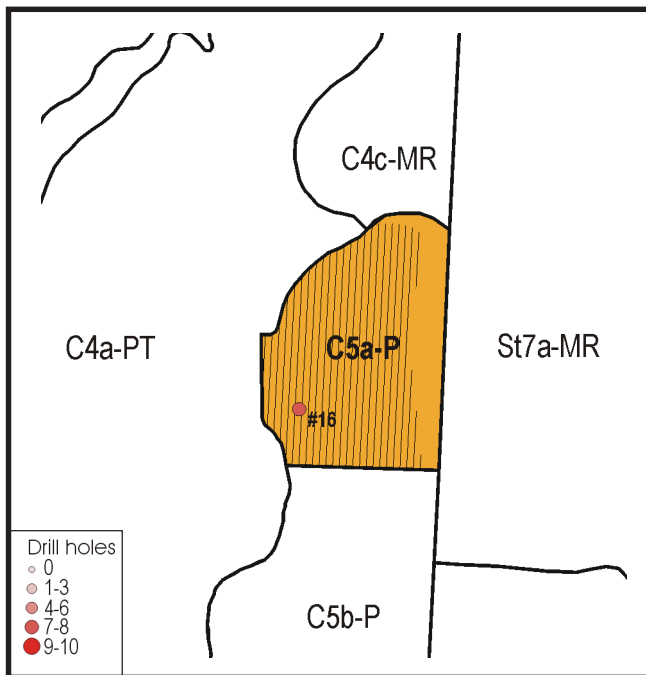
Deep overburden reduces the desirability of this high quality deposit.

#### Prairie Habitat Assessment:

High quality mesic prairie and butterfly habitat with scattered woody encroachment.

#### Fen Impacts:

Mining below the water table buffer would cause impacts to both fens by diverting ground water.



#### Drillhole Statistics

Drillhole	Gravel Thickness	Gravel Above Fen	Aggregate Ratio	Quality
16	45	-3.92	2.25	8.0

#### Area Statistics

	Landtype	Acres
	Mesic Prairie (Northwest)	20.70
	Total	20.70

#### Dakota Skipper Habitat

Habitat	Acres
Confirmed Good	15.66
Total	15.66

#### Timeframe:

It is unlikely that this area will be mined because the overburden is 20' in drill hole #16. Very little gravel would be available above the water table buffer, given the proximity of this parcel to the fens. The status of this should be reassessed in 75 years.

#### Recommendations:

Mining the aggregate is not economically feasible in the current and foreseeable future. Habitat and fen impacts would be severe. The area should be preserved through a 75 year lease, easement, other protection agreement, or sale.

**Habitat Management:** Maintain prairie with prescribed burning or mowing hay. Eliminate woody encroachment by girdling or cutting.

## C5b-P: Preserve, Clay County, (Section 31, Hagen Township)

### Aggregate Potential:

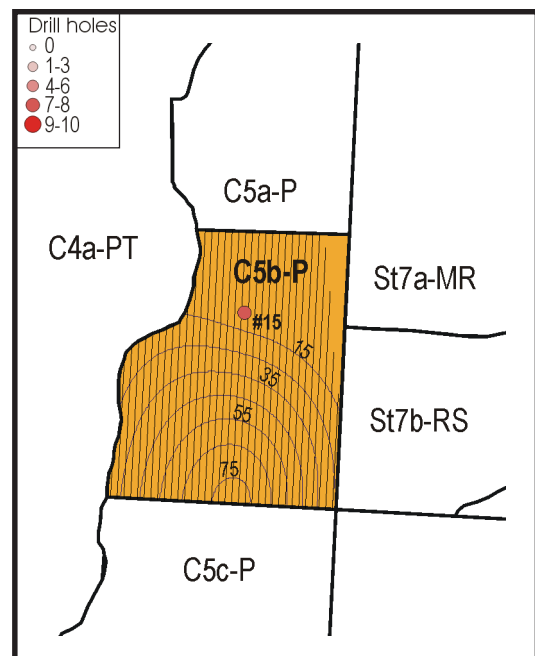
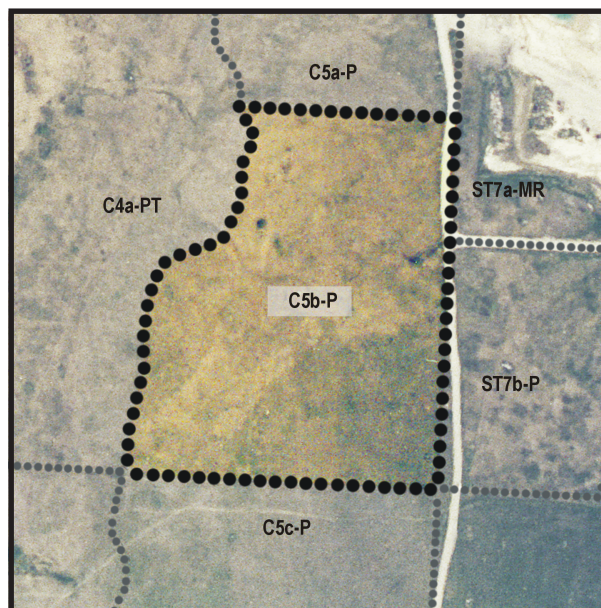
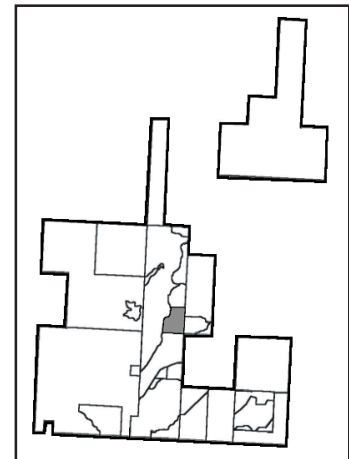
High quality and quantity gravel found in drill samples south of parcel. Overburden increases significantly to the north and quality diminishes.

### Prairie Habitat Assessment:

High quality mesic prairie utilized by endangered species.

### Fen Impacts:

Mining below the ground water buffer would cause severe impacts to south fen due to alteration of groundwater regime.



Drillhole Statistics

Drillhole	Gravel Thickness	Gravel Above Fen	Aggregate Ratio	Quality
15	72	-4.59	3.79	8.0

Dakota Skipper Habitat

Habitat	Acres
Confirmed Good	26.70
Total	26.70

### Recommendations:

Severe impacts would result from disruption of this area. The gravel resource is not economically feasible to mine in the current market because of overburden depth although its quality is high. This is a high conflict area. In order to maintain habitat, prevent fragmentation, and maintain ground water delivery to the south fen, a lease, easement, or other protection agreement should be established for a minimum of 75 years. Or, the county could sell this parcel and secure alternate supplies of road gravel.

**Habitat Management:** Maintain prairie through prescribed burning or haying.

### Timeframe:

This area should be preserved and managed for prairie by lease or easement for 75 years if the county maintains ownership. The status of this should be reassessed in 75 years.

Area Statistics

Landtype	Acres
Mesic Prairie (Northwest)	27.64
Total	27.64